

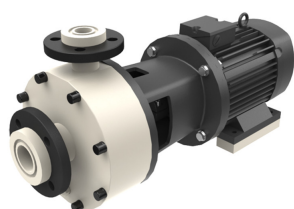
SHB PLASTIC SPIRAL CASED CENTRIFUGAL PUMP DATASHEET



Flow rate (Q) up to 130 m³/h

Head (H) up to 42 m

Drive rating up to 11 kW

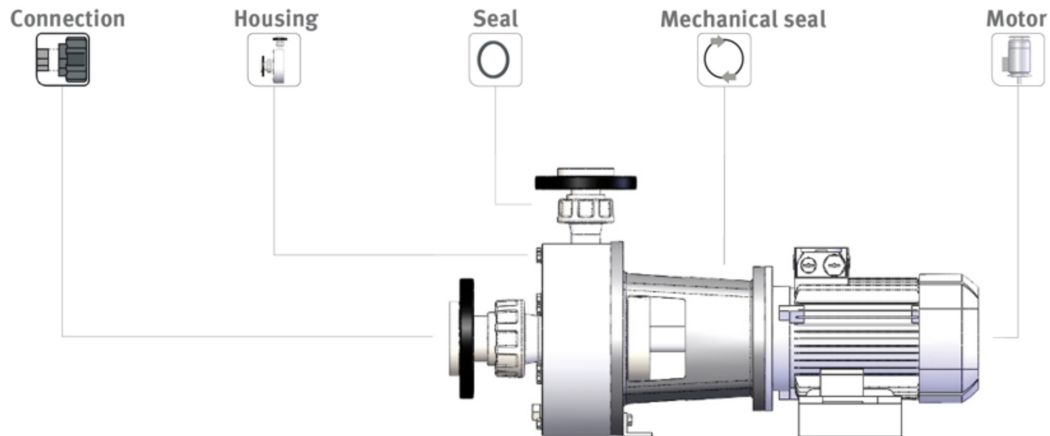


Characteristics

- Horizontal single-stage spiral cased pump
- Shaft sealing through single or double acting mechanical seal
- Circulation, rinsing, quench or barrier medium depending on application
- Made of sturdy plastic components, ensuring excellent operating reliability even under extreme operating conditions
- Broad range of applications through diverse construction and material combinations
- Closed impeller
- Impeller fastening independent of rotational direction with fluid-proof encapsulation
- Stainless steel screws (1.4301)
- Corrosion protection through 2-component protective paint

<https://www.stuebbe.com/en/products-and-systems/pumps/>

Pictogram



Product range SHB horizontal pump

Types			15-60	20-100	25-125	32-125	32-180	40-125	40-180	50-180	100-200
Delivery head, flow rate H2O 50 Hz 3000 min-1											
h _{max} (m) H2O			9,20	15,50	21,00	30,00	40,00	30,00	40,00	40,00	12,00
Q _{max} (m³/h) H2O			5,10	6,90	12,50	26,50	26,50	35,00	39,00	78,00	127,00
Housing											
	PP		✓	✓	✓	✓	✓	✓	✓	✓	✓
	PVDF		✓	✓	✓	✓	✓	✓	✓	✓	✓
	PE		✓	✓	✓	✓	✓	✓	✓	✓	✓
Connection											
	Union DIN 8063		✓	✓	✓	✓	✓	✓	✓	✓	✓
	Fixed flange DIN EN 1092 / ANSI									✓	✓
sealing											
	EPDM		✓	✓	✓	✓	✓	✓	✓	✓	✓
	FPM		✓	✓	✓	✓	✓	✓	✓	✓	✓
	FFKM		•	•	•	•	•	•	•	•	•
Mechanical seal (single / double acting)											
	Slide materials	SSiC / SSiC	✓	✓	✓	✓	✓	✓	✓	✓	✓
		SSiC / carbon	✓	✓	✓	✓	✓	✓	✓	✓	✓
Secondary seal		EPDM	✓	✓	✓	✓	✓	✓	✓	✓	✓
		FPM	✓	✓	✓	✓	✓	✓	✓	✓	✓
		FFKM	•	•	•	•	•	•	•	•	•
	Spring- and construction materials	stainless steel	✓	✓	✓	✓	✓	✓	✓	✓	✓
		Hasteloy	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor											
	3000/3600 min-1 50 / 60 Hz	50 Hz									
		60 Hz									
		0,37 kW	0,43 kW	✓							
		0,55 kW	0,63 kW	✓							
		0,75 kW	0,86 kW		✓						
		1,10 kW	1,27 kW		✓						
		1,50 kW	1,75 kW			✓					
		2,20 kW	2,55 kW			✓		✓			
		3,00 kW	3,45 kW			✓		✓			
		4,00 kW	4,55 kW			✓		✓		✓	
		5,50 kW	6,30 kW				✓			✓	
		7,50 kW	8,60 kW				✓			✓	
		11,00 kW	12,60 kW				✓			✓	
		15,00 kW	17,30 kW				✓			✓	
		18,50 kW	21,30 kW							✓	
	1500/1800 min-1 50 / 60 Hz	0,37 kW	0,43 kW	✓							
		0,55 kW	0,63 kW		✓						
		0,75 kW	0,86 kW			✓					
		1,10 kW	1,27 kW			✓					
		1,50 kW	1,75 kW			✓		✓			
		2,20 kW	2,55 kW						✓		
		3,00 kW	3,45 kW							✓	
		4,00 kW	4,55 kW							✓	
		5,50 kW	6,30 kW								
		7,50 kW	8,60 kW								✓
		11,00 kW	12,60 kW								✓
		15,00 kW	17,30 kW								✓
		18,50 kW	21,30 kW								✓

✓ = Available as standard

• = Optionally available / Available on request

Accessories / special version

		15-60	20-100	25-125	32-125	32-180	40-125	40-180	50-180	100-200
Connection										
	Flange adapter DIN EN 1092 / ANSI	✓	✓	✓	✓	✓	✓	✓		
Special voltage										
	Motor with special voltage	•	•	•	•	•	•	•	•	•
Frequency converter										
	Pumps with attached frequency converter	•	•	•	•	•	•	•	•	•
Special version										
	Sealing chamber	•	•	•	•	•	•	•	•	•
	Quench	•	•	•	•	•	•	•	•	•
Paintwork										
	Standard RAL 7016	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Other RAL colors	•	•	•	•	•	•	•	•	•
	Special paintwork	•	•	•	•	•	•	•	•	•
Impeller										
	Closed impeller	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Semi-open impeller	•	•	•	•	•	•	•	•	•
	PE impeller	•	•	•	•	•	•	•	•	•
ATEX version										
	Device category 2G (for use in zone 1)	•	•	•	•	•	•	•		
	Device category 3G (for use in zone 2)	•	•	•	•	•	•	•	•	•

✓ = Available as standard

• = Optionally available / Available on request

SHB Plastic spiral cased centrifugal pump

Use	- Chemical plant manufacture - Water treatment - electroplating plants - PCB industry
Application	- For conveying neutral, aggressive, groundwater endangering, toxic acids, alkalines or mixed solutions, provided that the pump components coming into contact with the fluids are resistant at the operating temperature according to the Stübbe resistance guide. Depending on the design of the mechanical seal, also suitable for crystallizing fluids and fluids with a low solid particle component.
Design	- Horizontal, mounted, single-stage pump with mechanical seal
Frame size	- SHB 15-80 to SHB 100-200
Technical design	- Horizontal single-stage, single-flow spiral cased pump - Block design, pump head flange-connected directly to motor via intermediate flange, standard motor (IEC standard) - The shaft is connected to the pump drive motor as an insert shaft or a coupling - Housing and impeller in PP, PE or PVDF - Stainless steel shaft for mounting the pump impeller with protective shaft sleeves made of plastic or carbon - Use of corrosion-proof and wear-proof plastics such as polypropylene (PP), polyethylene (PE) or polyvinylidene fluoride (PVDF)
Connection	- union DIN 8063 - PP-steel flange DIN 1092 - PP-steel flange ANSI
STÜBBE resistance guide	- www.stuebbe.com/pdf_resistance/300051.pdf
Type of priming	- not self-priming
Housing material (with medium contact)	- PVDF - PP - PE
Material sealing element (in contact with medium)	- EPDM - FPM
Material screws (without medium contact)	- 1.4301
Flow rate (Q)	- up to 130 m³/h
Head (H)	- up to 42 m
Viscosity	- Fluids up to approx. 160 mm²/s (kinematic viscosity)

SHB Plastic spiral cased centrifugal pump

Fluid temperature	- PP: up to 80 °C - PE-HD: up to 60 °C - PVDF: up to 110 °C
Impeller	- Closed radial impeller - Impeller fastening independent of rotational direction using embedded metal hub and groove and feather key connection between impeller and shaft. - Sealing of impeller fastening by means of plastic impeller cap with internal round sealing ring.
Shaft	- The particularly rigid pump shaft made of stainless steel ensures malfunction-free operation and creates ideal operating conditions for the mechanical seal. - The shaft is connected to the pump drive motor as an insert shaft or a coupling.
Shaft sleeve	- PP, PVDF or PE-HD depending on the conveyed fluid.
Shaft seal	- Shaft sealing through single and double acting mechanical seal. - Circulation, rinsing, quench or barrier medium depending on application. - Sliding materials silicon carbide against silicon carbide (SiC/SiC). Round sealing rings made of FPM or CSM, metal components made of V4A as a standard or Hastelloy as an option. This combination is highly reliable and covers a wide range of applications. - Other material combinations available on request.
Coating	- Several layers of high-quality 2-component protective lacquer protect any metal components not made of stainless steel from corrosion.
Drive rating	- up to 11 kW
Motor (standard version)	- Three-phase motor according to IEC - Voltage 230/400 V, 50/60 Hz - Voltage 400/690 V, 50/60 Hz from 3 kW - Model IM B34/B35, size-dependent - Type of Protection IP 55 - Speed n= 1500 rpm or 3000 rpm - Paintwork: RAL 7016 acid resistant - Suitable for operation connected to a frequency changer - Integrated PTC resistor
Testing	- according to DIN EN ISO 9906
Accessories	- Pump monitor: Pressure and temperature sensor PTM - Flange adapter DIN EN 1092 / ANSI - Container for self-priming
Weblink Product	- https://www.stuebbe.com/en/products-and-systems/pumps/

SHB Plastic spiral cased centrifugal pump

Sectional drawing SHB 15-80 to 25-125

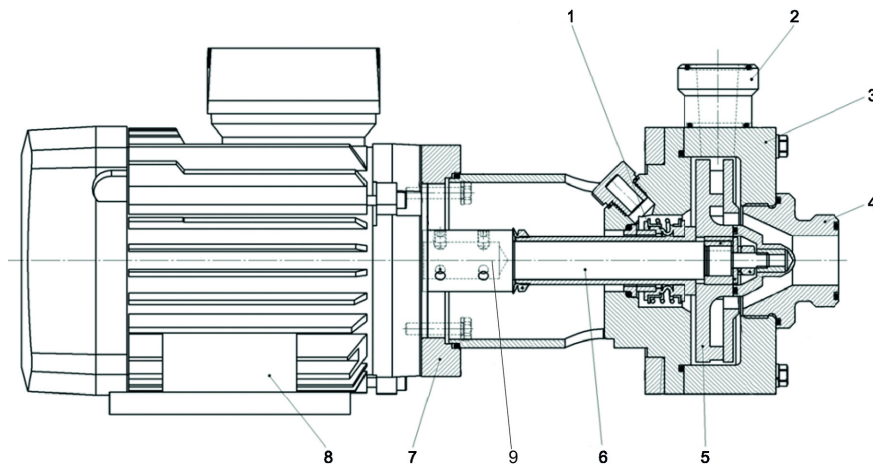
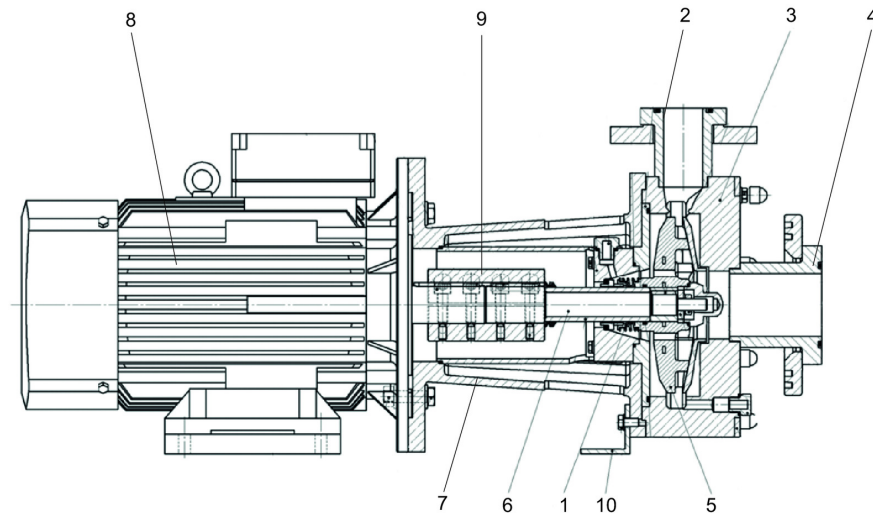


Illustration with screw connection

Sectional view SHB 32-125 to 100-200: Illustration with optional flange

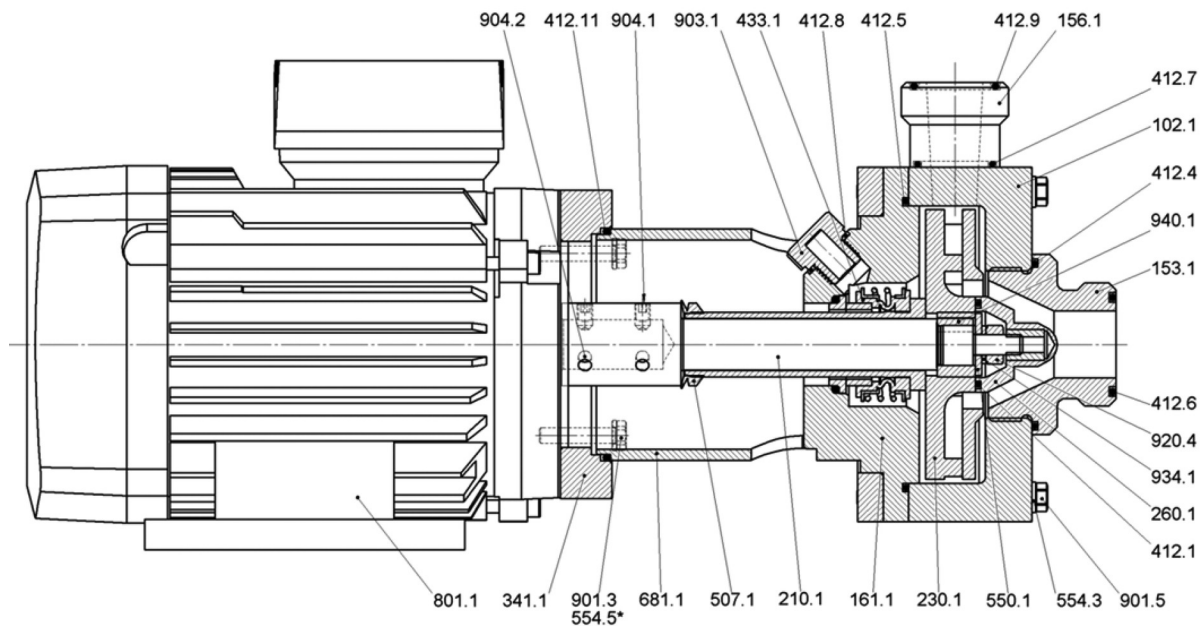


Flange adapter on SHB 32-125 to SHB 40-180 (not shown), fixed flange on SHB 50-80 and SHB 100-200 (shown)

Item	Description
1	Mechanical seal
2	Discharge Flange
3	Volute casing
4	Suction branch
5	Impeller
6	Shaft
7	Motor bell housing
8	Motor
9	Coupling (motor)
10	Support foot

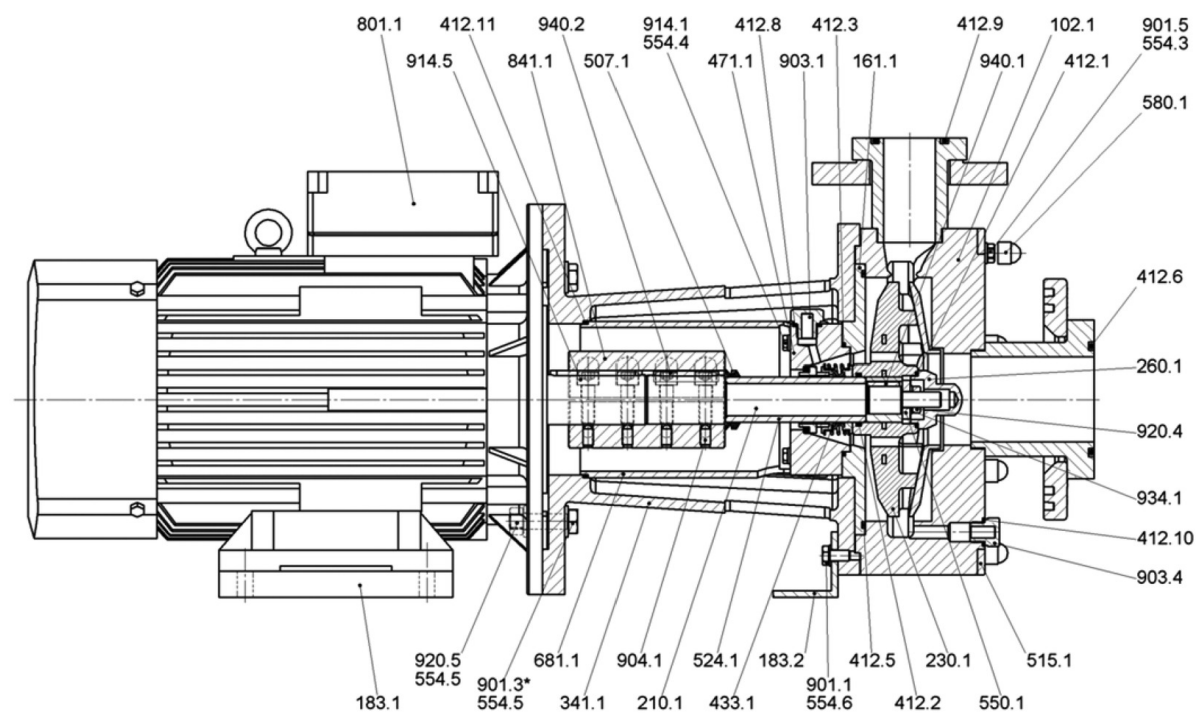
SHB Plastic spiral cased centrifugal pump

Sectional drawing SHB 15-80 to 25-125



Not applicable for motor size 80

Sectional view SHB 32-125 to 100-200: Illustration with optional flange



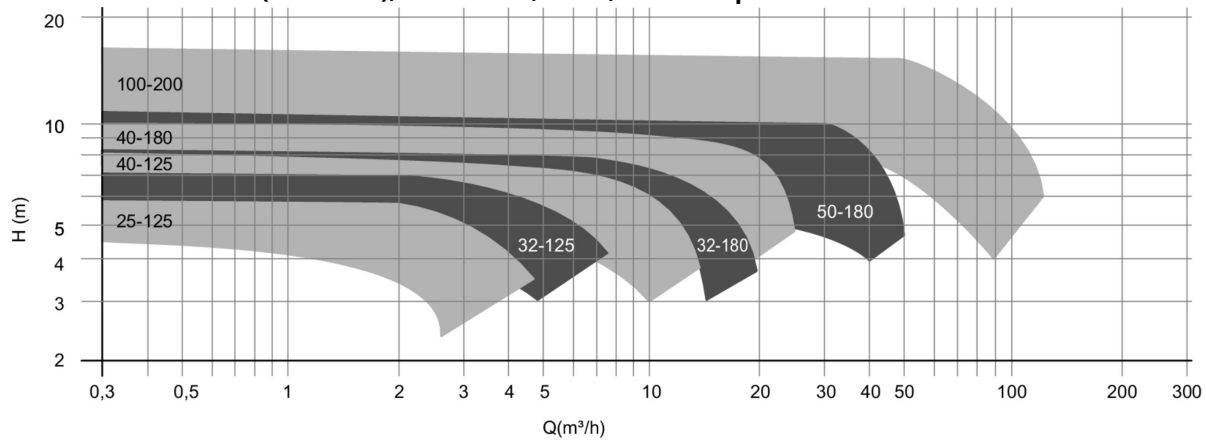
Flange adapter on SHB 32-125 to SHB 40-180 (not shown), fixed flange on SHB 50-80 and SHB 100-200 (shown)

SHB Plastic spiral cased centrifugal pump

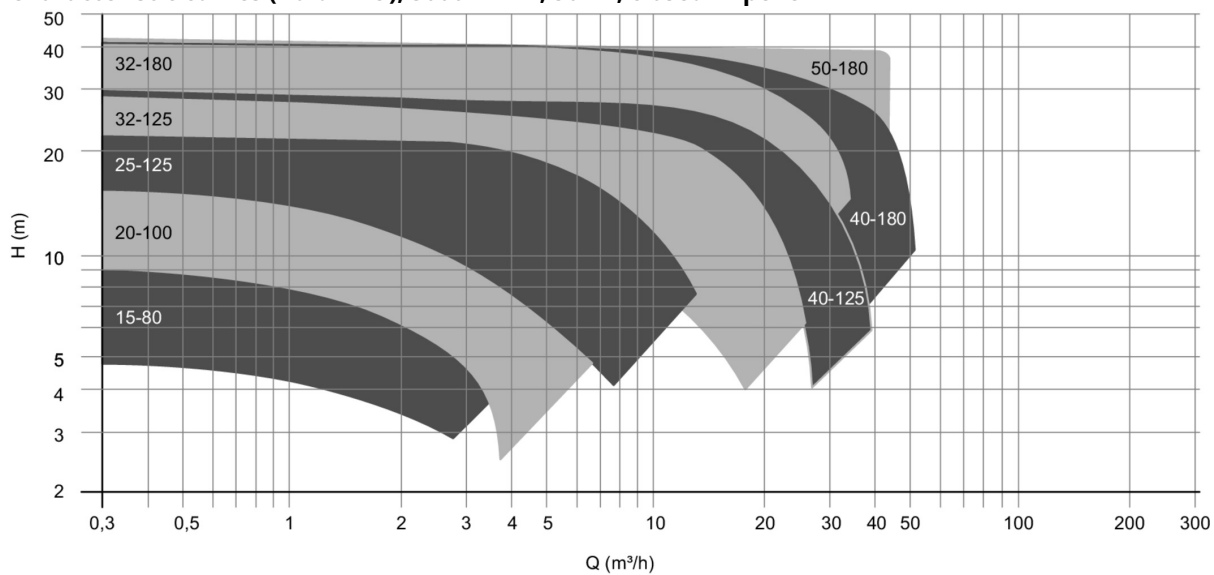
Item	Description
102.1	Volute casing
153.1	Suction branch
156.1	Discharge Flange
161.1	Housing cover
183.1	Spacer
183.2	Support foot
210.1	Shaft
230.1	Impeller with welded shaft sleeve
260.1	Impeller cap
341.1	Motor bell housing
412.1	O-ring
412.2	O-ring
412.3	O-ring
412.4	O-ring
412.5	O-ring
412.6	O-ring
412.7	O-ring
412.8	O-ring
412.9	O-ring
412.10	O-ring
412.11	O-ring
433.1	Mechanical seal
471.1	Seal cover
515.1	Reinforcement ring
524.1	shaft protection sleeve
507.1	Splash ring
550.1	Disc
554.3	Disc
554.4	Disc
554.5	Disc
554.6	Disc
580.1	Protective cap
681.1	Coupling guard
801.1	Motor
841.1	Coupling (motor)
901.1	Hexagon head screw
901.3	Hexagon head screw
901.5	Hexagon head screw
902.3	Stud bolt
903.1	Plug screw
903.4	Plug screw
904.1	grub screw
904.2	grub screw
914.1	Hexagon head screw
914.5	Cylinder screw
920.1	Hexagon nut
920.4	Hexagon nut
920.5	Hexagon nut
934.1	Spring ring
940.1	Key
940.2	Key

SHB Plastic spiral cased centrifugal pump

Characteristic curves (fluid H₂O), 1500 min⁻¹, 50 Hz, closed impeller

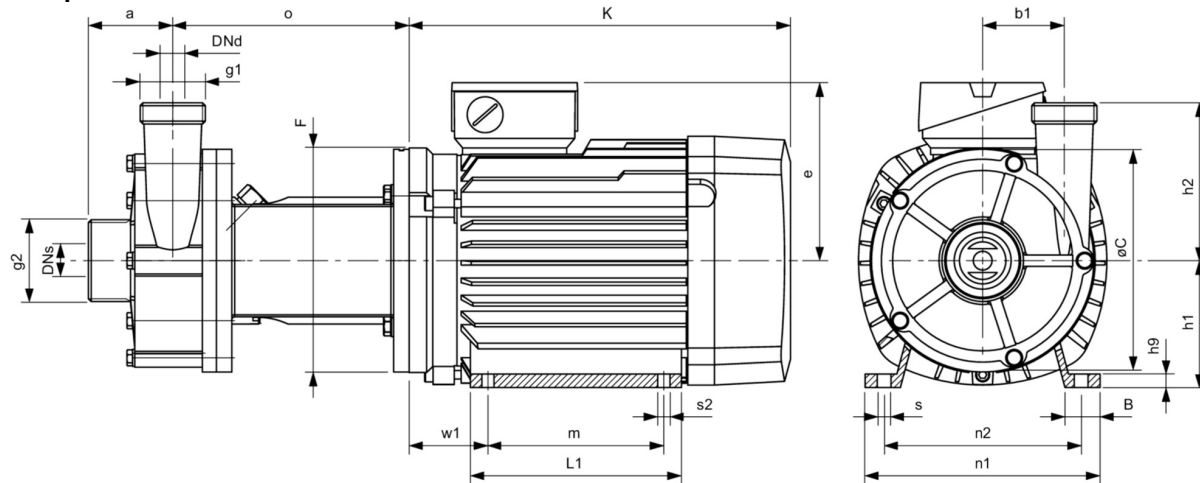


Characteristic curves (fluid H₂O), 3000 min⁻¹, 50 Hz, closed impeller

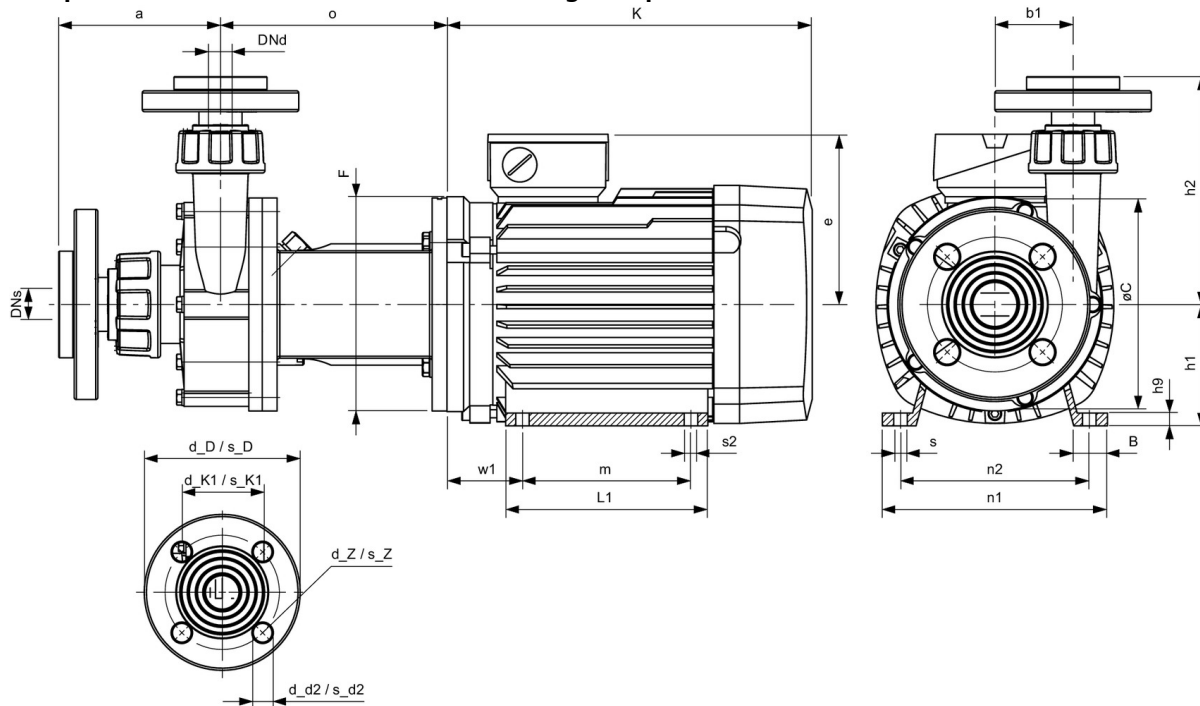


SHB Plastic spiral cased centrifugal pump

Pump dimensions for SHB 15-80 to 25-125, Threaded connector



Pump dimensions for SHB 15-80 to 25-125, Flange adapter



SHB Plastic spiral cased centrifugal pump

Dimensions threaded connector (all dimensions in mm / * in inch)

	DNd	g1 *	DNs	g2 *	a	b1	øC	h2
SHB 15-80	15	1	20	1 1/4	63	40	120	93
SHB 20-100	20	1 1/4	25	1 1/2	63	50	138	102
SHB 25-125	25	1 1/2	32	2	60	58	158	112

Dimensions flange adapter DIN (all dimensions in mm)

DIN	DNd	d_D	d_K1	d_d2	d_Z	DNs	s_D	s_K1	s_d2	s_Z	a	b1	øC	h2
SHB 15-80	15	95	65	14	4	20	106	75	14	4	115	40	120	141
SHB 20-100	20	106	75	14	4	25	116	85	14	4	120	50	138	154
SHB 25-125	25	116	85	14	4	32	141	100	18	4	120	58	158	169

Dimensions flange adapter ANSI (all dimensions in mm)

ANSI	DNd	d_D	d_K1	d_d2	d_Z	DNs	s_D	s_K1	s_d2	s_Z	a	b1	øC	h2
SHB 15-80	15	95	60	16	4	20	105	70	16	4	115	40	120	141
SHB 20-100	20	105	70	16	4	25	113	80	16	4	120	50	138	154
SHB 25-125	25	113	80	16	4	32	130	89	16	4	120	58	158	169

Dimensions (all dimensions in mm)

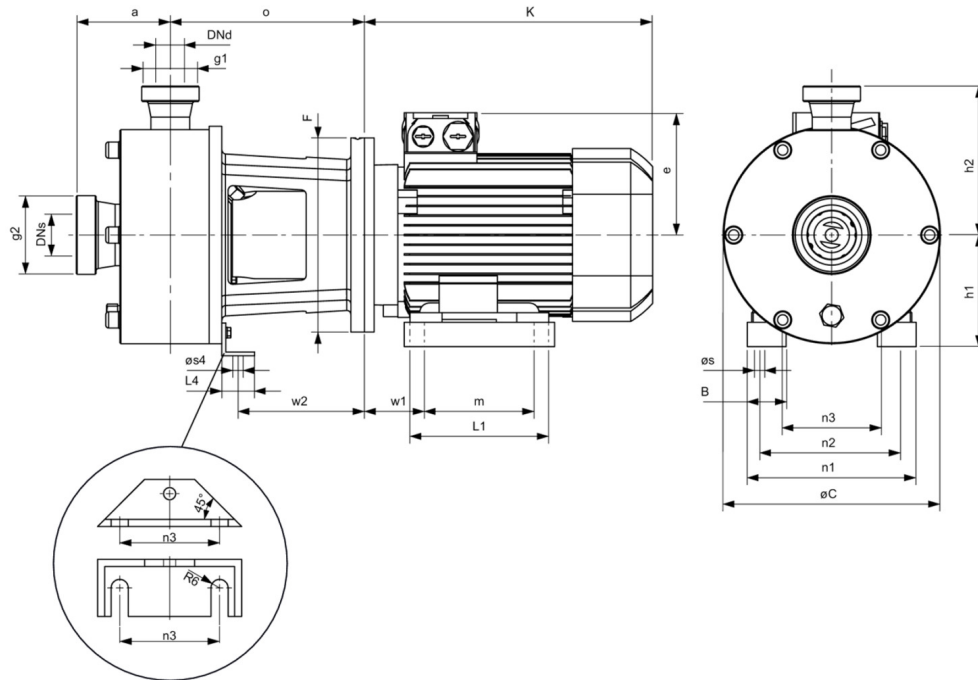
	IE	kW	n min-1	BG	e	B	F	h1	h9	K	L1	m	n1	n2	o	s	s2	w1
SHB 15-80	IE2	0,37	1450	71M	111	30,5	140	71	7	210	106	90	132	112	144	10	7	45
	IE2	0,37	2900	71M	111	30,5	140	71	7	210	106	90	132	112	144	10	7	45
	IE2	0,55	2900	71M	111	30,5	140	71	7	210	106	90	132	112	144	10	7	45
SHB 20-100	IE2	0,55	1450	80M	121	30,5	160	80	8	252	118	100	150	125	154	13,5	9,5	49,5
	IE2	0,55	2900	71M	111	30,5	140	71	7	210	106	90	132	112	144	10	7	45
	IE3	0,75	2900	80M	121	30,5	160	80	8	252	118	100	150	125	154	13,5	9,5	49,5
	IE3	1,1	2900	80M	121	30,5	160	80	8	287	118	100	150	125	154	13,5	9,5	49,5
SHB 25-125	IE3	0,75	1450	80M	121	30,5	160	80	8	287	118	100	150	125	168	13,5	9,5	49,5
	IE3	1,1	1450	90S	126	30,5	160	90	10	297	143	100	165	140	168	14	10	56
	IE3	0,75	2900	80M	121	30,5	160	80	8	252	118	100	150	125	168	13,5	9,5	49,5
	IE3	1,1	2900	80M	121	30,5	160	80	8	287	118	100	150	125	168	13,5	9,5	49,5
	IE3	1,5	2900	90S	126	30,5	160	90	10	297	143	100	165	140	168	14	10	56
	IE3	2,2	2900	90L	126	30,5	160	90	10	337	143	125	165	140	168	14	10	56

Weight

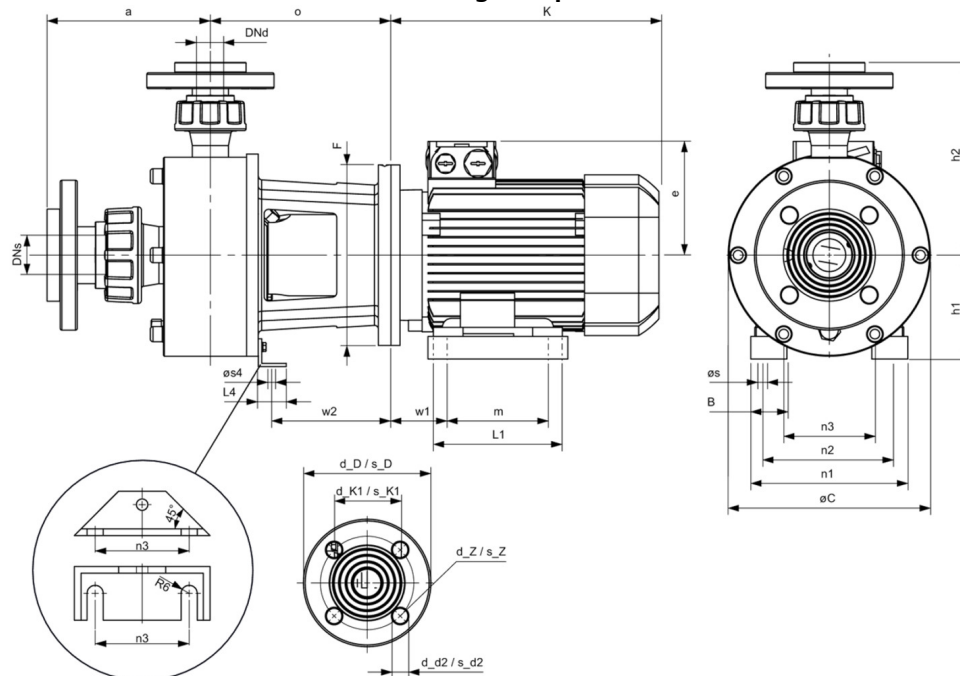
	IE	kW	n min-1	BG	Pump weight (~kg)	Motor weight (~kg)	Total weight (~kg)
SHB 15-80	IE2	0,37	1450	71M	3,2	6,5	9,7
	IE2	0,37	2900	71M	3,2	4,5	7,7
	IE2	0,55	2900	71M	3,2	6,5	9,7
SHB 20-100	IE2	0,55	1450	80M	3,9	10	13,9
	IE2	0,55	2900	71M	3,6	6,5	10,1
	IE3	0,75	2900	80M	3,9	9	12,9
	IE3	1,1	2900	80M	3,9	11	14,9
SHB 25-125	IE3	0,75	1450	80M	5,2	11	16,2
	IE3	1,1	1450	90S	5,2	13	18,2
	IE3	0,75	2900	80M	5,2	9	14,2
	IE3	1,1	2900	80M	5,2	11	16,2
	IE3	1,5	2900	90S	5,2	13	18,2
	IE3	2,2	2900	90L	5,2	15	20,2

SHB Plastic spiral cased centrifugal pump

Pump dimensions for SHB 32-125 to 100-200, Threaded connector



Pump dimensions for SHB 32-125 to 100-200, Flange adapter



Flange adapter on SHB 32-125 to SHB 40-180 (shown), fixed flange on SHB 50-80 and SHB 100-200 (not shown)

SHB Plastic spiral cased centrifugal pump

Dimensions threaded connector (all dimensions in mm / * in inch)

	DNd	g1 *	DNs	g2 *	a	øC	h2
SHB 32-125	32	2	50	2 3/4	97	224	153,5
SHB 40-125	40	2 1/4	65	3 1/2	95,5	224	149
SHB 32-180	32	2	50	2 3/4	106	270	176,5
SHB 40-180	40	2 1/4	65	3 1/2	105	270	172,5

Dimensions flange adapter DIN (all dimensions in mm)

DIN	DNd	d_D	d_K1	d_d2	d_Z	DNs	s_D	s_K1	s_d2	s_Z	a	øC	h2
SHB 32-125	32	141	100	18	4	50	166	125	18	4	181	224	213,5
SHB 40-125	40	151	110	18	4	65	186	145	18	4	193,5	224	219
SHB 32-180	32	141	100	18	4	50	166	125	18	4	190	270	236,5
SHB 40-180	40	151	110	18	4	65	186	145	18	4	202	270	247,5
SHB 50 - 180 *	50	166	125	18	4	80	201	160	18	8	146	300	223
SHB 100-200 *	100	221	180	18	8	150	286	240	22	8	170	340	245

Dimensions flange adapter ANSI (all dimensions in mm)

ANSI	DNd	d_D	d_K1	d_d2	d_Z	DNs	s_D	s_K1	s_d2	s_Z	a	øC	h2
SHB 32-125	32	130	89	16	4	50	160	121	20	4	181	224	213,5
SHB 40-125	40	133	98	16	4	65	180	140	19	4	193,5	224	219
SHB 32-180	32	130	89	16	4	50	160	121	20	4	190	270	236,5
SHB 40-180	40	133	98	16	4	65	180	140	19	4	202	270	247,5
SHB 50-180 *	50	160	121	20	4	80	190	152	19	4	146	300	223
SHB 100-200 *	100	229	190,5	19	8	150	279	241	22	8	170	340	245

SHB Plastic spiral cased centrifugal pump

Dimensions (all dimensions in mm)

	IE	kW	n min-1	BG	B	e	F	h1	h9	K	L1	L4	m	n1	n2	n3	o	Øs	Øs4	w1	w2
SHB 32-125	IE3	1,1	2900	80	30,5	121	200	115	8	287	118	-	100	150	125	-	200	10	-	50	-
	IE3	1,1	1450	90S	30,5	126	200	115	10	297	143	-	100	165	140	-	200	10	-	56	-
	IE3	1,5	1450	90L	30,5	126	200	115	10	337	143	-	125	165	140	-	200	10	-	56	-
	IE3	1,5	2900	90S	30,5	126	200	115	10	297	143	-	100	165	140	-	200	10	-	56	-
	IE3	2,2	2900	90L	30,5	126	200	115	10	337	143	-	125	165	140	-	200	10	-	56	-
	IE3	3,0	2900	100L	42,0	166	250	127	12	370,5	176	-	140	196	160	-	210	12	-	63	-
	IE3	4,0	2900	112M	46,0	177	250	127	12	354	176	-	140	226	190	-	210	12	-	70	-
SHB 40-125	IE3	1,5	1450	90L	30,5	126	200	115	10	337	143	-	125	165	140	-	202,5	10	-	56	-
	IE3	1,5	2900	90S	30,5	126	200	115	10	297	143	-	100	165	140	-	202,5	10	-	56	-
	IE3	2,2	2900	90L	30,5	126	200	115	10	337	143	-	125	165	140	-	202,5	10	-	56	-
	IE3	3,0	2900	100L	42,0	166	250	127	12	370,5	176	-	140	196	160	-	212,5	12	-	63	-
	IE3	4,0	2900	112M	46,0	177	250	127	12	354	176	-	140	226	190	-	212,5	12	-	70	-
SHB 32-180	IE3	1,5	1450	90L	30,5	126	200	136	10	337	143	40	125	165	140	70	249	10	12	56	175
	IE3	1,5	2900	90S	30,5	126	200	136	10	297	143	40	100	165	140	70	249	10	12	56	175
	IE3	2,2	2900	90L	30,5	126	200	136	10	337	143	40	125	165	140	70	249	10	12	56	175
	IE3	3,0	2900	100L	42,0	166	250	136	12	370,5	176	40	140	196	160	70	259	12	12	63	185
	IE3	4,0	2900	112M	46,0	177	250	136	12	354	176	40	140	226	190	70	259	12	12	70	185
	IE3	5,5	2900	132S	53,0	202	300	152	15	385	218	50	140	256	216	110	279	12	14	89	205
	IE3	7,5	2900	132S	53,0	202	300	152	15	435	218	50	140	256	216	110	279	12	14	89	205
	IE3	11,0	2900	160M	60,0	237	350	175	18	494	300	50	210	300	254	110	309	15	14	108	235
	IE3	15,0	2900	160M	60,0	237	350	175	18	494	300	50	210	300	254	110	309	15	14	108	235
SHB 40-180	IE3	1,5	1450	90L	30,5	126	200	136	10	337	143	40	125	165	140	70	252	10	12	56	175
	IE3	2,2	1450	100L	42,0	166	250	136	12	370,5	176	40	140	196	160	70	262	12	12	63	185
	IE3	1,5	2900	90S	30,5	126	200	136	10	297	143	40	100	165	140	70	252	10	12	56	175
	IE3	2,2	2900	90L	30,5	126	200	136	10	337	143	40	125	165	140	70	252	10	12	56	175
	IE3	3,0	2900	100L	42,0	166	250	136	12	370,5	176	40	140	196	160	70	262	12	12	63	185
	IE3	4,0	2900	112M	46,0	177	250	136	12	354	176	40	140	226	190	70	262	12	12	70	185
	IE3	5,5	2900	132S	53,0	202	300	152	15	385	218	50	140	256	216	110	282	12	14	89	205
	IE3	7,5	2900	132S	53,0	202	300	152	15	435	218	50	140	256	216	110	282	12	14	89	205
	IE3	11,0	2900	160M	60,0	237	350	175	18	494	300	50	210	300	254	110	312	15	14	108	235
	IE3	15,0	2900	160M	60,0	237	350	175	18	494	300	50	210	300	254	110	312	15	14	108	235
SHB 50-180	IE3	2,2	1450	100L	42,0	166	250	152	12	370,5	176	50	140	196	160	110	269	12	14	63	185
	IE3	3,0	1450	100L	42,0	166	250	152	12	370,5	176	50	140	196	160	110	269	12	14	63	185
	IE3	4,0	1450	112M	46,0	177	250	152	12	354	176	50	140	226	190	110	269	12	14	70	185
	IE3	4,0	2900	112M	46,0	177	250	152	12	354	176	50	140	226	190	110	269	12	14	70	185
	IE3	5,5	2900	132S	53,0	202	300	152	15	385	218	50	140	256	216	110	289	12	14	89	205
	IE3	7,5	2900	132S	53,0	202	300	152	15	435	218	50	140	256	216	110	289	12	14	89	205
	IE3	11,0	2900	160M	60,0	237	350	175	18	494	300	50	210	300	254	110	319	15	14	108	235
	IE3	15,0	2900	160M	60,0	237	350	175	18	494	300	50	210	300	254	110	319	15	14	108	235
	IE3	18,5	2900	160L	60,0	237	350	175	18	554	300	50	254	300	254	110	319	15	14	108	235
	IE3	18,5	2900	160L	60,0	237	350	175	18	554	300	50	254	300	254	110	319	15	14	108	235
SHB 100-200	IE3	7,5	1450	132M	53,0	202	300	172	15	435	218	50	178	256	216	110	310	12	14	89	205
	IE3	11,0	1450	160M	60,0	237	350	175	18	494	300	50	210	300	254	110	340	15	14	108	235
	IE3	15,0	1450	160L	60,0	237	350	175	18	554	300	50	254	300	254	110	340	15	14	108	235

SHB Plastic spiral cased centrifugal pump

Weight

	IE	kW	n min-1	BG	Pump weight (~kg)	Motor weight (~kg)	Total weight (~kg)
SHB 32-125	IE3	1,1	2900	80	16,3	11	27,3
	IE3	1,1	1450	90S	16,3	13	29,3
	IE3	1,5	1450	90L	16,3	16	32,3
	IE3	1,5	2900	90S	16,3	13	29,3
	IE3	2,2	2900	90L	16,3	16	32,3
	IE3	3	2900	100L	18,4	26	44,4
	IE3	4	2900	112M	18,4	34	52,4
SHB 40-125	IE3	1,5	1450	90L	16,7	16	32,7
	IE3	1,5	2900	90S	16,7	13	29,7
	IE3	2,2	2900	90L	16,7	16	32,7
	IE3	3	2900	100L	18,8	26	44,8
	IE3	4	2900	112M	18,8	34	52,8
SHB 32-180	IE3	1,5	1450	90L	25,8	16	41,8
	IE3	1,5	2900	90S	25,8	13	38,8
	IE3	2,2	2900	90L	25,8	16	41,8
	IE3	3	2900	100L	27,2	26	53,2
	IE3	4	2900	112M	27,2	34	61,2
	IE3	5,5	2900	132S	31,3	43	74,3
	IE3	7,5	2900	132S	31,3	57	88,3
	IE3	11	2900	160M	38,3	75	113,3
	IE3	15	2900	160M	38,3	84	122,3
SHB 40-180	IE3	1,5	1450	90L	26,2	16	42,2
	IE3	2,2	1450	100L	27,6	30	57,6
	IE3	1,5	2900	90S	26,2	16	42,2
	IE3	2,2	2900	90L	26,2	16	42,2
	IE3	3	2900	100L	27,6	26	53,6
	IE3	4	2900	112M	27,6	34	61,6
	IE3	5,5	2900	132S	31,7	43	74,7
	IE3	7,5	2900	132S	31,7	57	88,7
	IE3	11	2900	160M	38,7	75	113,7
	IE3	15	2900	160M	38,7	84	122,7
SHB 50-180	IE3	2,2	1450	100L	32,3	30	62,3
	IE3	3	1450	100L	32,3	30	62,3
	IE3	4	1450	112M	32,3	34	66,3
	IE3	4	2900	112M	32,3	34	66,3
	IE3	5,5	2900	132S	36,5	43	79,5
	IE3	7,5	2900	132S	36,5	57	93,5
	IE3	11	2900	160M	43,5	75	118,5
	IE3	15	2900	160M	43,5	84	127,5
	IE3	18,5	2900	160L	43,5	94	137,5
SHB 100-200	IE3	7,5	1450	132M	50	64	114
	IE3	11	1450	160M	57	83	140
	IE3	15	1450	160L	57	100	157